Health Information Technology: On the Cusp of Healthcare Transformation

Ashish K. Jha, MD, MPH

Nearly every Institute of Medicine report or blue-ribbon panel tasked with developing ideas for fixing our healthcare delivery system points to the same solution: greater use of health information technology (HIT). The mantra is so widely accepted that there were few opponents of the 2009 Health Information Technology for Economic and Clinical Health (HITECH) Act. Even 5 years prior, in 2004, when President Bush first called for universal use of electronic health records (EHRs), there was a surprising degree of bipartisan consensus that HIT is fundamentally important if we are going to improve the quality and efficiency of care that Americans receive.

The HITECH Act has led to a dramatic uptick in the adoption and use of HIT. Despite more doctors and hospitals using these systems, the quality and efficiency gains that were widely expected have not been evident. While some advocates argued that simply implementing HIT would have dramatic effects on the care we provide, the evidence that has emerged is more sobering and more complex: HIT may be necessary for high-value healthcare, but it is not sufficient. This leaves us at a critical crossroads with a perplexing question: What else is required to ensure that the national investment in HIT pays off for clinicians, hospitals, and ultimately, the patients they serve?

The special issue of *The American Journal of Managed Care* helps us take the initial steps toward addressing this question. While there are no simple solutions, no easy answers for how best to optimize the impact of HIT, each of the articles in the issue begins to plot a path forward.

The piece by Adler-Milstein and Huckman is a clear illustration of the type of study that can help us understand how to improve EHR use. Using the EHR as a window to delve into 42 practices, the authors carefully examine critical issues like information flow and delegation. The authors' findings are as novel as they are salient: while EHR use unto itself may help physicians be more productive, the real gains come when physicians are able to use EHRs to delegate more of the work to support staff. This kind of task shifting exemplifies the types of changes in work that

led to efficiency gains in other industries. The Adler-Milstein paper provides concrete and actionable insights for clinical leaders looking to drive productivity gains in their practice. On a similar theme, Stahl and colleagues find that how physicians use EHRs (for example, how much time physicians spend with the patient) can have important impacts on patient flow, ordering of tests, and patient wait times. Taking a step back and seeing the bigger picture, Marsha Gold finds that HIT-enabled information flow is one of the critically important ways in which providers can improve care delivery. Her study is particularly helpful to senior managers of large healthcare organizations who might wonder how to optimize HIT use in order to deliver population-oriented healthcare services.

Optimizing HIT use is likely to be particularly challenging for small practices, especially as payment and delivery reform ramp up. Begum and colleagues help us understand these challenges and find that a diverse group of small practices can effectively engage in pay-for-performance programs when they have EHRs in place. Encouragingly, EHR tools help these providers respond to incentives and more readily change their practices. Another critically important tool to drive improved performance is prediction models, especially as they relate to readmissions. An important study by Gilbert and colleagues describes the development and use of an HIT-enabled model for use in more effective identification and management of patients who might be readmitted after discharge, enabling us to begin to tackle the unnecessarily high number of patients readmitted to the hospital after discharge.

One of the major concerns with HIT is that it might create disparities among providers and patients, especially based on age. Younger people are often thought to more quickly adopt and use new technologies, and to the extent that this is true in healthcare, it creates new barriers, especially for older Americans for whom safe, effective care is particularly important. There are surprisingly few empirical data to shed light on these concerns, highlighting the importance of 2 studies in this issue. Kaelber and colleagues found that in a large public healthcare system, health information exchange tools (used to gather data

from disparate locations) were actually more likely to be used for older Americans, as well as minorities and women. Further, most clinicians thought that they improved care coordination and led to better overall care. Lam and colleagues examined a stand-alone patient-physician communication tool and found high levels of satisfaction in all groups and good evidence that when the system is designed well, all patients, irrespective of age, can use it effectively with little difficulty.

Finally, a key paper by Gold and colleagues finds that while a small proportion of vendors have a majority of the market for EHRs that meet Stage 1 meaningful use, there is plenty of competition and little evidence to suggest that providers lack meaningful choices. This is encouraging because it suggests that the systems themselves may improve over time, and help drive greater gains in care quality and efficiency.

The body of work presented in the *Journal* is representative of the kind of next-generation HIT studies sorely needed to further our understanding of how to use these technologies effectively. It is particularly critical because the adoption of in-

formation systems in other industries took decades to pay off. Given the financial burden that our healthcare system places on our society, we don't have decades to wait. Good research can alter that timeline—and indeed, good science ought to teach us how to use technology to drive improvements in care. With this special issue of the *Journal*, we begin to close the gap between adoption of HIT and delivery of high-value healthcare.